

# The MY NASA DATA Project:

## Mentoring and inquiry using NASA Data on Atmospheric and Earth Science for Teachers and Amateurs

### WHAT IS MY NASA DATA?

Mentoring and inquiry using NASA Data on Atmospheric and Earth Science for Teachers and Amateurs (MY NASA DATA) is a project to enable K-12 teachers and students, as well as citizen scientists, to explore the large volumes of data that NASA collects about the Earth from Space. Students apply content knowledge, and use scientific inquiry and math skills as they access and display microsets of the Earth System.

### WHAT IS A MICROSET?

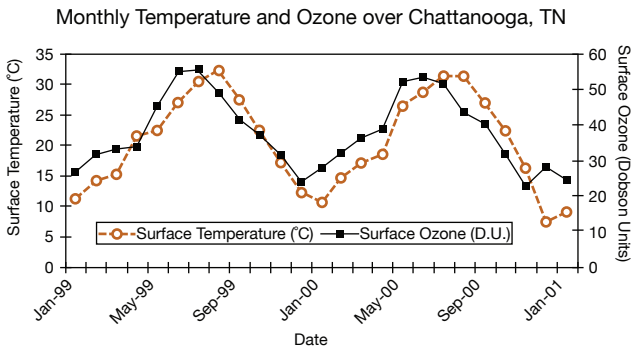
A main goal of the MY NASA DATA project is to remove the barriers (such as file size and format, and complicated computer tools) that prevent the use of authentic NASA Earth System Science data in the classroom or by the interested public. A microset is a small amount of data – perhaps a single parameter for the whole globe; or a time series for a single location – extracted from a much larger data file. It is in a simple format, such as plain text, or accessible through a user-friendly tool.

### WHAT TYPES OF MICROSETS ARE AVAILABLE?

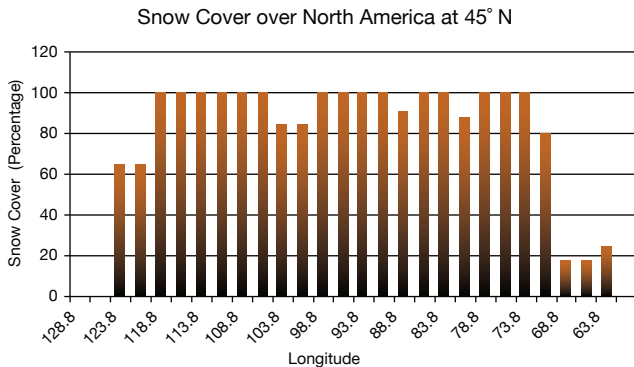
MY NASA DATA microsets are primarily made from data holdings of the Science Mission Directorate at NASA Langley Research Center in Hampton, VA. A variety of microsets, either static or customized using the Live Access Server (LAS), are available. The focus of the information includes Earth's atmosphere (e.g., aerosols, air quality, clouds, precipitation); snow and ice cover (e.g., monthly snow/ice amount), and surface conditions (e.g., sea surface temperature, vegetation, and radiation). Most of the data are global at a typical resolution of one degree in latitude and longitude. Microsets are NOT high resolution images.

### SAMPLE LESSON PLAN DATA AND GRAPHS

<http://mynasadata.larc.nasa.gov/lessons.html>



Linkages between Surface Temperature and Tropospheric Ozone. The line graph shows monthly surface temperatures and surface ozone satellite measurements from over Chattanooga, TN from Jan 99 to Jan 01. The graph's purpose is to determine if the two datasets have similar patterns.



Snow Cover by Latitude. The bar graph shows satellite snow cover measurements from 45 degrees N over a range of longitudes. The graph's purpose is to show graphically how the snow cover amount changes across North America.

### EDUCATIONAL RESOURCES AND STANDARDS ALIGNMENT

In addition to the microsets, the MY NASA DATA website offers a collection of lesson plans, project ideas, and related resources to help you get started with data exploration. Some were developed by the team, while others have been contributed by educators who have used the MY NASA DATA website. All lessons identify relevant national or state education standards. The MY NASA DATA team also has developed an Earth Science glossary and related science content page to help explain many of the concepts and parameters used on the website.

### HOW CAN I GET HELP?

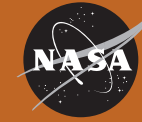
A team of scientists and educators receives emails sent to the address on the back of this brochure. In addition, an e-Mentor network can provide assistance to those using the data. You can submit questions, whether scientific or pedagogical in nature, to this network through a simple form on the website. The network includes both scientists and educators who share the task of responding to inquiries. You can also join the mentor network!

### WHAT IS REQUIRED?

A computer with a web browser and an Internet connection are the only things you will need to explore the MY NASA DATA website. Data exploration and visualization tools used by the project are web-based. Some lessons involve the use of spreadsheet software or graphing calculators.

<http://mynasadata.larc.nasa.gov>





## Contact Information

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## How To Participate In The MY NASA DATA Community

1. Explore the MY NASA DATA website.
2. Find engaging lesson plans to help you meet state standards.
3. Use the Live Access Server to discover data to help teach concepts in your curriculum.
4. Contribute a lesson plan you develop.
5. Pose a question to the e-Mentor network.
6. Join the e-Mentor network and help answer questions.
7. Submit student projects that use MY NASA DATA for possible posting on the website.
8. Give feedback on the website lesson plans, data microsets and tools.
9. Share the project with colleagues.

# MY NASA DATA